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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,874	12/20/2001	Chika Nakanishi	217408US0CONT	4217

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EXAMINER	
MORRIS, PATRICIA L	

ART UNIT	PAPER NUMBER
1625	

DATE MAILED: 03/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/022,874	NAKANISHI ET AL.	
	Examiner	Art Unit	
	Patricia L. Morris	1625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

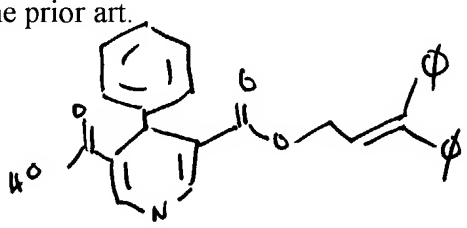
DETAILED ACTION

Claims 1-27 are under consideration in this application.

Election/Restrictions

Applicants have not amended the claims to the elected compounds as asserted. Further, applicants have not clearly admitted on the record that the compounds are indeed obvious optional variants. Either it is one invention or it is not. Applicants cannot have it both ways. If one were to hold unity of invention, then one reference will be a reference for the entire genus.

In addition to the elected piperdine compound set forth on page 3 of the previous Office action, the search has been extended to include an additional species which is found to be well known in the prior art.



The restriction requirement is deemed sound and proper and is hereby maintained.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 16-19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 16-19 violate 35 U.S.C. 101 and 35 U.S.C. 112, since it is drafted in terms of use. See Clinical Products vs. Brenner, 255 F. Supp. 151; 149 USPQ 475 (D.C. District of Columbia 1966).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-25 are rejected under 35 U.S.C. 102(a), (b) and/or (e) as being anticipated by Uneyama et al. (US 6,350,766) and Niwa et al (WO 98/49144).

Uneyama et al. disclose the instant compounds. Note, for example, lines 53-54 in column 65 of Uneyama et al. Hence, the instant compounds are deemed to be anticipated therefrom.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Uneyama et al. and Niwa et al.

Uneyama et al. and Niwa et al. generically embrace the instant compound having the same use. Note, for example, the compounds of formula (I) in columns 2-4, or the compound recited in column 65 of Uneyama et al.

It is believed that one having ordinary skill in the art would have found the claimed compounds *prima facie* obvious, since they are generically embraced by the disclosed formula; In re Susi, 440 F.2d 442, 169 USPQ 423 (CCPA 1971). See also In re Malagari, 499 F.2 1297, 182 USPQ 549 (CCPA 1974); In re Lemin, 332 F.2d 839, 141 USPQ 814 (CCPA 1964); In re Rosicky, 276 F.2d 656, 125 USPQ 341 (CCPA 1960). The requisite motivation for arriving at the claimed compounds stems from the fact that they fall within the generic class of compounds disclosed by the references. Accordingly, one having ordinary skill in the art would have been motivated to prepare any of the compounds embraced by the disclosed generic formula, including those encompassed by the claims, with the expectation that each of them would be suitable for the treatment of the claimed multiples diseases.

It is believed well settled that a reference may be relied upon for all that it would have reasonably conveyed to one having ordinary skill in the art. In re Fracalossi, 681 F.2d 792, 215 USPQ 569 (CCPA 1982); In re Lamberti, 545 F.2d 747, 192 USPQ 278 (CCPA 1976); In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); In re Susi, supra.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 16-19 and 21-23 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the treatment of diabetes mellitus, does not reasonably provide enablement for the prophylaxsis of any and all diabetic conditions. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is "undue". These factors include 1) the breadth of the claims, 2) the nature of the invention, 3) the state of the prior art, 4) the level of one of ordinary skill, 5) the level of predictability in the art, 6) the amount of direction provided by the inventor, 7) the existence of working examples, and 8) the quantity of experimentation needed to make or use the invention based on the content of the disclosure. In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

No enablement is shown for the treatment of any of the claimed diseases. The *in vitro* tests are insufficient to show the treatment of any and all unknown cerebrovascular disorders and neurodegenerative diseases, withdrawal symptoms after addiction to drug, AIDS, Parkinson's disease etc. There are no working examples anywhere in the specification.

The disclosure provides no indication of whether the compounds treat any disease of any claimed disease.

The claims require undue experimentation on the part of the reader to determine which compound (at what host - dosage relationship) has utility against which type of diabetic condition.

Applicants' disclosure fails to provide a description of a method of treating any type of disease in a single infected host. Methods of treating a specific condition with a active agent, whether old or new, should be enabled by a written decription containing a statistically significant example, which should include the organism treated. Applicants have not provided such a disclosure. Moreover, applicants' statements with regard to the various dosages and modes of administration of the instant compounds, for the treatment of any and all of the claimed diseases are merely speculative, since nowhere in the specification as filed, is described a method of treating or inhibiting any type of disease, *in vivo* in a single patient.

Thus, applicants' situation is much like that of In re Kirk, 153 USPQ 48: "What the applicants are really saying to those skilled in the art is take these compounds experiment, and find out what use they have". Undue experimentation would be required.

In view of the extreme difficultlies that have been are still being encountered in the treatment of AIDs, AIDS related dementia, Alzheimer's disease, Parkinson's disease, etc., such

utililites are unbelievable on their face, and therefore, they must be supported by sufficient evidence demonstrating such utilities. When the best efforts have failed to achieve a goal, it is reasonable for the PTO to require evidence that such a goal has been accomplished, In re Ferens, 163 USPQ 609.

In cases directed to chemical compounds, which are being used for their physiological/biological activity, the scope of the claims must have a reasonable correlation to the scope of enablement provided by the specification. See In re Surrey, 151 USPQ 724 regarding sufficiency of disclosure for a Markush group and In re Wiggins, 179 USPQ 421.

Claims 1, 5, 6, 10 and 12 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The expressions heteroaryl and heteroaryl lower alkyl are employed with considerable abandon throughout claims 1, 5, 6, 10 and 12 with no indication given as to what the heteroaryl groups really are. One, one reading the indication of heterocyclic ring applied by applicants in R^6 and R^7, has no idea what size ring is being claimed, or where the hetero atoms are in this unknown ring or what the substituents may be. Moreover, the term substituted is employed in claim 26 with no indication of the variables The term contains is open-ended.

The heteroaryl rings possible here is wide open to staggering possibilities.

Applicants place too much conception with the reader. Azines, Diazines, Triazines, Thiazines? Piperazine is saturated. Where are the starting materials in the specification?

One needs to know, exactly, where in the ring, the hetero atoms are: 1,2 or 1,3 or 1,4 or 1,2,4 or 1,3,5, etc., as each is a different entity, with a separate search.

Where is, what is intended by applicant, supported in the specification with sufficient representative exemplification?

Adjacent N, S or O atoms in a ring have not been shown to be producible as stable at room temperature. What is the source of the starting material? Where is the adequate representative exemplification in the specification to support the claim language?

The heteroaryl ring presents a problem of lack of clear claiming, and support in the specification for the variables sought.

This rest specific conception with the reader.

What exactly is intended, and where is that supported by the specification? Even any combination of hetero atoms, selected from the group consisting of O, S or N, rests specific conception with the reader. Not a fair burden in return for applicants receiving a 20 year monopoly.

A Markush listing of intended, conceived of, producible heteroaryl rings, is what is needed here. It is not possible to classify and search the molecule unless one knows exactly which heteroaryl ring is being claimed here.

One should be able, from a reading of the claims, determine what that claim does or does not encompass.

Why? Because that claim precludes others from making, using, or selling that compound for 20 years. Therefore, one must know what compound is being claimed.

The unknown heteroaryl rings and substituents are so broad that they cause the claim to have a potential scope of protection beyond that which is justified by the specification disclosure.

The written description is considered inadequate here in the specification. Conception of the intended rings and substituents should not be the role of the reader. Applicants should, in return for a 20 year monopoly, be disclosing to the public that which they know as an actual demonstrated fact. The disclosure should not be merely an invitation to experiment. This is a 35 USC 112, first paragraph. If you (the public) find that it works, I claim it, is not a proper basis of patentability. In re Kirk, 153 USPQ 48, at page 53.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 2, 16-19, 26 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 16-19 are substantial duplicates of claim 1. Claims 16-19 do not further limit claim 1. All the claims are drawn to the compound of claim 1.

The expression Y is indefinite in claims 1 and 2 since Y is a linking alkylene or alkenylene group yet applicants define Y as a teminal group.

Claims 26 and 27 lack antecdent basis since claim 1 does not permit subsitution on the heteroaryl or defines alkyl as alkoxy. The term alkyl is not defined as alkoxy.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible

harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-27 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-60 of U.S. Patent No. 6,350,766. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant compounds are disclosed therein.

Information Disclosure Statement

Applicants' PTP 1449 cannot be changed since the form has been scanned and is the official copy on the record. Further, the 1449 has been initialed by a different examiner and it is not clear which reference had been considered,

Conclusion

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia L. Morris whose telephone number is (571) 272-0688. The examiner can normally be reached on Mondays through Fridays.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patricia L. Morris
Primary Examiner
Art Unit 1625

plm
March 3, 2004